Incentive Contracts

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Topics

Incentive Contract Basics

Incentivizing Acquisition Outcomes

Understanding CPIF & FPIF

Incentive Strategy – A New Approach

Incentive Contract Basics FAR 16.401

- **Incentive contracts are designed to obtain *specific acquisition objectives* by--**
  - **(1) Establishing reasonable and attainable targets that are clearly communicated to the contractor; and**
  - **(2) Including appropriate incentive arrangements designed to --**
    - **(i) motivate contractor efforts that might not otherwise be emphasized and**
    - **(ii) discourage contractor inefficiency and waste.**

Incentive Contract Basics

- **FAR 16.402-1 Cost Incentives**
- ***No incentive contract may provide for other incentives without also providing a cost incentive (or constraint).***
- **(b) Except for cost-plus-award-fee contracts (see 16.401(e)), incentive contracts include a target cost, a target profit or fee, and a profit or fee adjustment formula that (within the constraints of a price ceiling or minimum and maximum fee) provides that --**
  - **(1) Actual cost that meets the target will result in the target profit or fee;**
  - **(2) Actual cost that exceeds the target will result in downward adjustment of target profit or fee; and**
  - **(3) Actual cost that is below the target will result in upward adjustment of target profit or fee.**

Incentivizing Acquisition Outcomes

- **It is *not* a coincidence that FAR Part 16-402 describes incentives in terms of acquisition outcomes :**
  - **Cost : Measures Actual (final) vs Target Cost**
  - **Performance: FAR provides examples**
    - **(e.g. a missile range, an aircraft speed, an engine thrust, or a vehicle maneuverability)**
  - **Schedule: *Delivery* incentive is the only one mentioned in FAR.**
- **Acquisition *outcomes* can only be assessed at contract completion**
  - **Exception - contracts for severable services**
    - **(e.g. maintenance, janitorial services)**

Avoid Interim Incentives

- **Evaluating cost, schedule and performance periodically (like award fees) or based on interim milestones is not the same as evaluating those acquisition outcomes**
- **Interim incentive payments are generally neither advisable nor necessary**
  - **Unless recoverable at completion, runs the risk of having paid incentives when acquisition outcomes not met**
  - **This was a fundamental problem with Award Fee contracts**
- **Satellites and Shipbuilding may be exceptions**
  - **Long period of performance (7-8 years) with one delivery at**

Cost Incentive

- **FAR says most incentive contracts include *only* cost incentives**
- **Why?**
  - **Because there is no ambiguity about the "value" to Government of a cost incentive.**
    - **The "value" is the money the Govt saves.**
- **A cost incentive usually incentivizes delivery.**
    - **Generally, the sooner the contractor delivers, the lower his total cost will be.**
- **With only a cost incentive there is no need to worry about competing incentives**

Competing Incentives

- **Cost Vs Performance**
  - **It will probably cost more to build a jet that flies at Mach 2.5 than Mach 2**
- **Performance vs Schedule**
  - **It will probably take longer to build & test a missile that will travel farther and be more accurate**
- **Schedule vs Cost**
  - **Can be competing but generally delivering early means less cost (shorter time for level of effort functions)**

Multiple Incentives
Proceed with Caution

- **We should only include non-cost incentives when we conclude that they will be effective in motivating the contractor to achieve desired outcomes *and* the desired outcomes have real value to the Government.**
  - **Is there a value to the Government of early delivery?**
    - **If avoiding or minimizing late delivery is more important, a negative incentive (less profit/fee) for late delivery should be used.**
  - **What is the value to the Government of performance above the requirement?**
    - **Cannot incentivize anything less than the**

Multiple Incentives - Example
Satellite Program

- **In Satellite programs, cost is important *but performance is paramount***
  - **We only have one chance to get it right.**
- **Incentive structure:**

Cost	7.0% 40/60 Under 80/20 Over
Ceiling Price	120%
Performance Incentive:	
Mission Success	3.8% (13 Critical Milestones)
On Orbit Performance	4.0%
On Orbit Performance (negative)	-4.0%

"All or Nothing" Incentives

- **"All or Nothing" incentives are powerful but can also have unintended consequences**
- **If incentive becomes unattainable, all motivation for contractor is lost.**
- **"All or Nothing" *never* makes sense for a cost incentive.**
  - **Example:**
    - **Contractor earns $1,000,000 incentive if he completes effort at or below a certain cost**
    - **The best financial outcome for the Govt is if the contractor *misses* the incentive by 1 dollar. (Govt pays $999,999 less)**
    - **Govt should never establish an incentive where it is not in Govt's best interest for contractor to earn the entire incentive**

Incentive Contract Types

- **Cost Plus Incentive Fee (CPIF):**
  - **Target Cost**
  - **Target Fee**
  - **Minimum Fee**
  - **Maximum Fee**
  - **Share Ratios (e.g. 70/30 Over , 60/40 Under)**

- **Fixed Price Incentive (Firm Target) (FPIF)**
  - **Target Cost**
  - **Target Profit** **(Profit not Fee, the last "F" in FPIF is "Firm-Target", not "Fee")**
  - **Target Price**
  - **Ceiling Price (Maximum Government Liability)**
  - **Share Ratios (e.g. 70/30 Over , 60/40 Under)**

Understanding Share Ratios

- **Share Ratios are what create the "profit or fee adjustment formula" referred to in FAR 16.402-1**

- **Share Ratios are always expressed as two numbers that add to 100%.**
  - **e.g. 70/30, 80/20, 50/50, 30/70**

  - **The first number represents the Government (or buyer) share**
  - **The second number is the Contractor (or seller) share**

- **Example:**
  - **"70/30 over" means the contractor will lose 30 cents of profit or fee for every dollar it overruns the Target Cost**

CPIF Example

Target Cost	$100.0	
Target Fee	9.0	9.0%
Target Cost & Fee	$109.0	
Minimum Fee	$ 4.0	
Maximum Fee	$ 14.0	

Share Ratios: 60/40 Over, 60/40 Under

At contract completion, contractor will be paid :

Actual Cost Incurred

+ Target Fee $

+ or - Fee Adjustment $ based on share ratio*

***Contractor can never be paid less than the Min Fee $ or more than the Max Fee $**

CPIF Example: How it works

	Underrun	Overrun
AT CONTRACT COMPLETION:		
Target Cost	$100.0	$100.0
Actual Cost Incurred	**$ 95.0**	**$105.0**
Underrun (Overrun)	5.0	(5.0)
X Contractor Share	X 40%	X 40%
Fee Adjustment	$ 2.0	(2.0)
CONTRACTOR IS PAID:		
Actual Cost Incurred	$ 95.0	$105.0
Target Fee	9.0	9.0
Fee Adjustment (FROM ABOVE)	2.0	(2.0)
Total Price Paid	$106.0	$112.0

Note:

In the underrun example, the contractor earns $11M fee, $9M + $2M, which is less than the Max Fee of $14M.

In the overrun example, the contractor earns $7M fee, $9M - $2M, which is greater than the Min Fee of $4M.

FPIF Example

Target Cost	$100.0
Target Profit	10.0
Target Price	$110.0
Ceiling Price	$118.0

Share Ratios: 50/50 Over, 50/50 Under

At contract completion, contractor will be paid :

*Actual Cost Incurred**

\+ Target Profit*

\+ or - Profit Adjustment based on share ratio*

*Contractor can never be paid more than the Ceiling Price

FPIF Example: How it works

	Underrun	Overrun
AT CONTRACT COMPLETION:		
Target Cost	$100.0	$100.0
Actual Cost Incurred	**$ 95.0**	**$105.0**
Underrun (Overrun)	5.0	(5.0)
X Contractor Share	X 50%	X 50%
Profit Adjustment	$ 2.5	(2.5)
CONTRACTOR IS PAID:		
Actual Cost Incurred	$ 95.0	$105.0
Target Profit	10	10
Profit Adjustment (FROM ABOVE)	2.5	(2.5)
Total Price Paid	$107.5	$112.5

Note:
In an overrun, this calculation is applied until the answer would exceed the Ceiling Price.

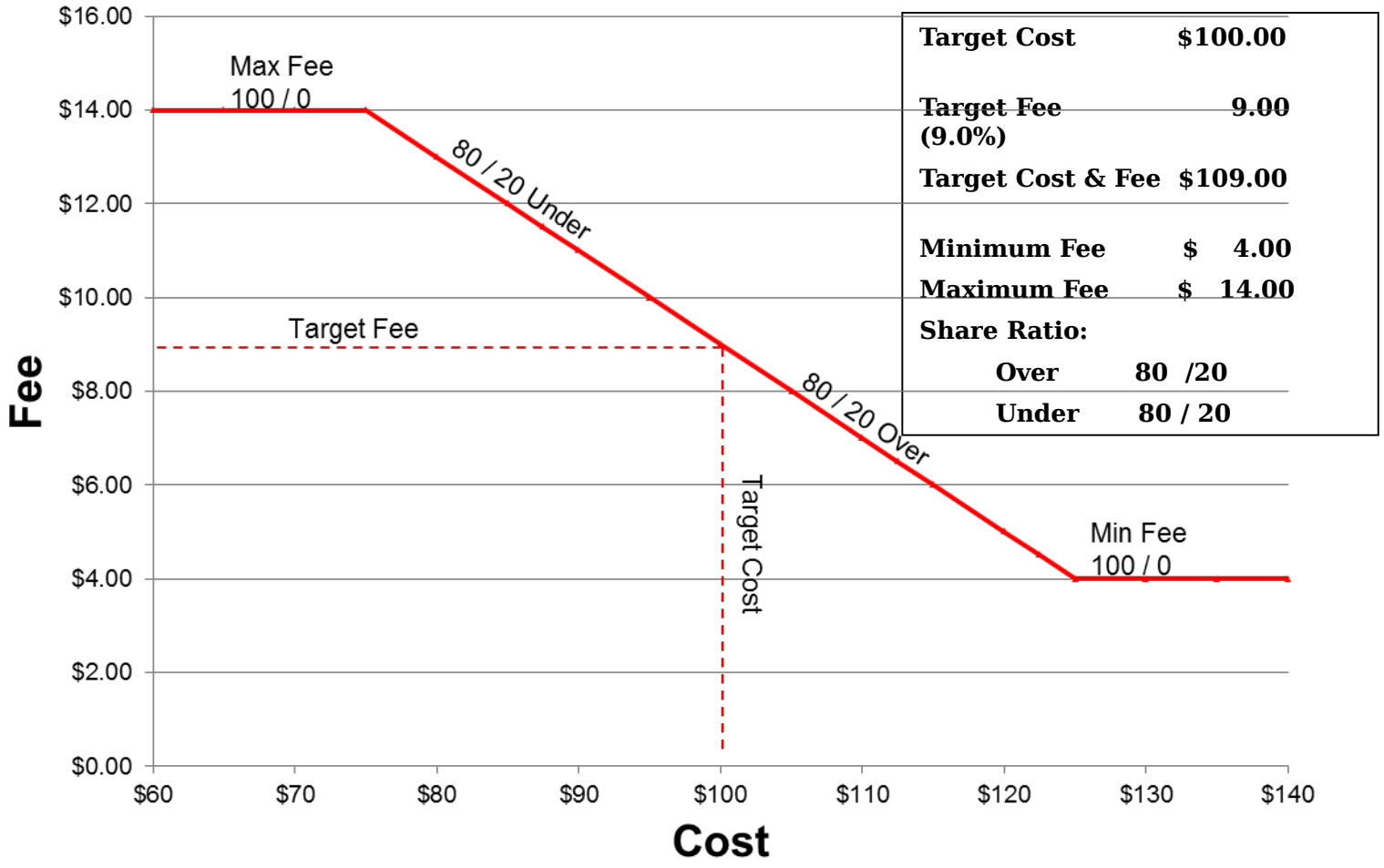
Total Price Paid can never be more than the Ceiling Price.

Incentive Graphs

Cost Incentive – The Basics

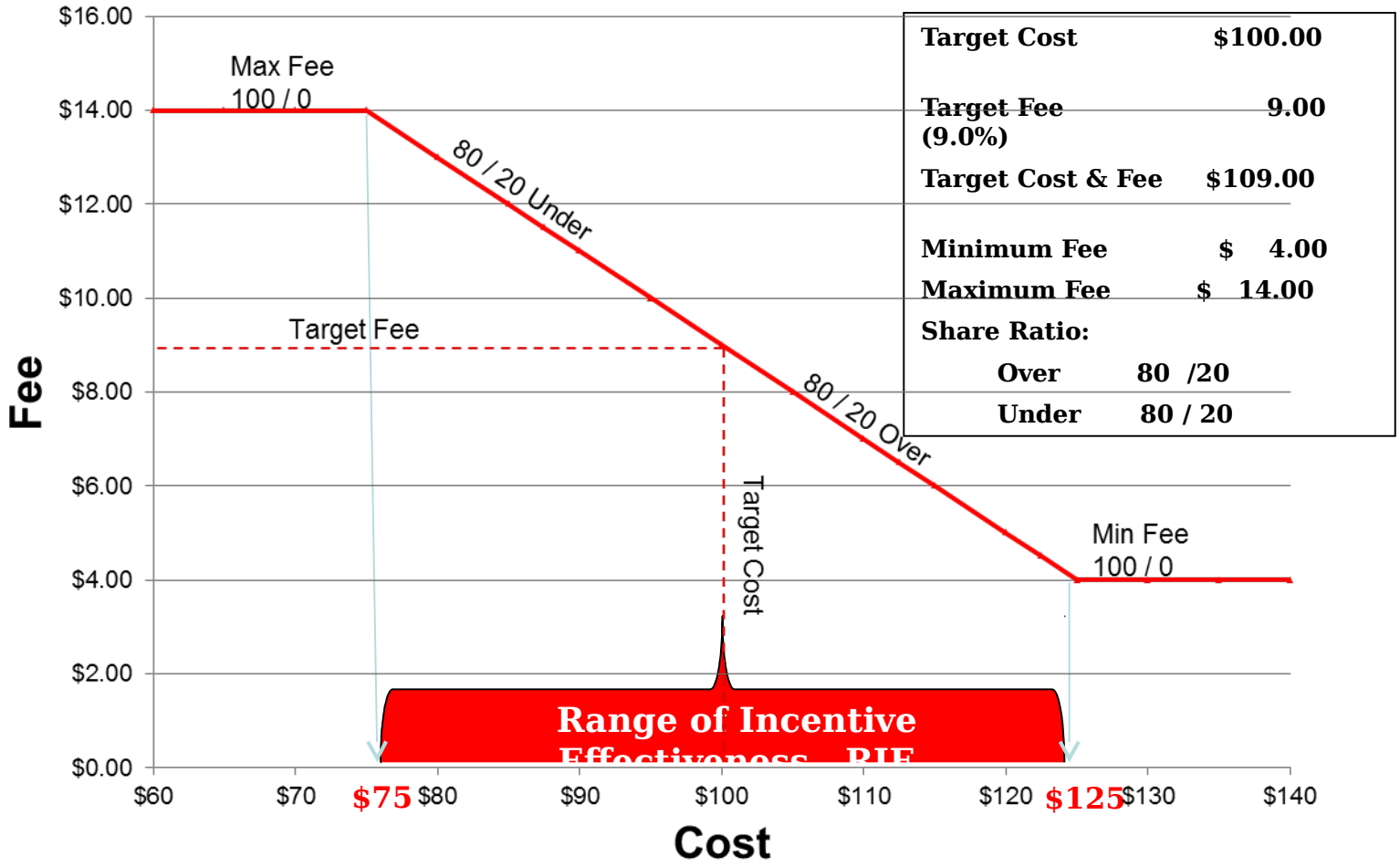
- **How did contractor do in performing the contract?**
  - **If final (actual) cost is less than Target Cost:**
    - **Contractor earns more fee/profit**
  - **If final (actual) cost is greater than Target Cost:**
    - **Contractor earns less fee/profit**

CPIF Graph



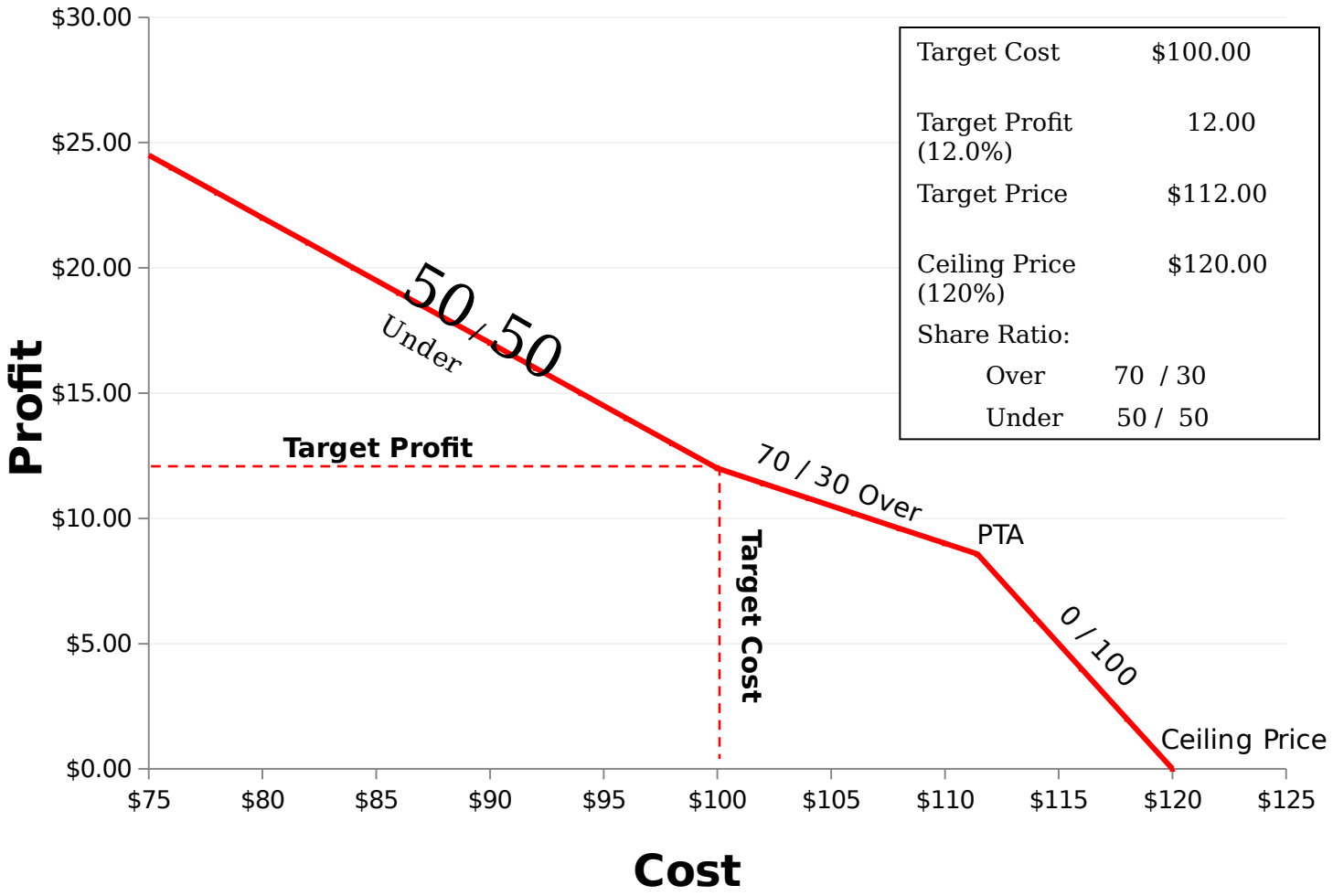
Target Cost	**$100.00**
Target Fee (9.0%)	**9.00**
Target Cost & Fee	**$109.00**
Minimum Fee	**$ 4.00**
Maximum Fee	**$ 14.00**
Share Ratio:	
Over	**80 /20**
Under	**80 / 20**

CPIF Graph



Contractor is incentivized between cost outcomes of $75 (earns Max Fee) and $125 (earns Min Fee)

FPIF Graph


$30.00
$25.00
$20.00
$15.00
$10.00
$5.00
$0.00
Profit
$75
$80
$85
$90
$95
$100
$105
$110
$115
$120
$125
Cost
50 / 50
Under
Target Profit
Target Cost
70 / 30 Over
PTA
0 / 100
Ceiling Price
Target Cost $100.00
Target Profit (12.0%) 12.00
Target Price $112.00
Ceiling Price (120%) $120.00
Share Ratio:
Over 70 / 30
Under 50 / 50

PTA Formula

- **Point of Total Assumption (PTA):**

Example:		
Target Cost	$100.00	
Target Profit	12.00	(12.0%)
Target Price	$112.00	
Ceiling Price	$120.00	(120%)
Share Ratios:	Over 70 / 30	Under 50 / 50

PTA = $\frac{\text{Ceiling Price – Target Price}}{\text{Government Overrun Share Ratio}}$ + Target Cost

PTA = $\frac{\$120 - \$112}{.7}$ + $100 = $111.43

Cost Incentive Geometry

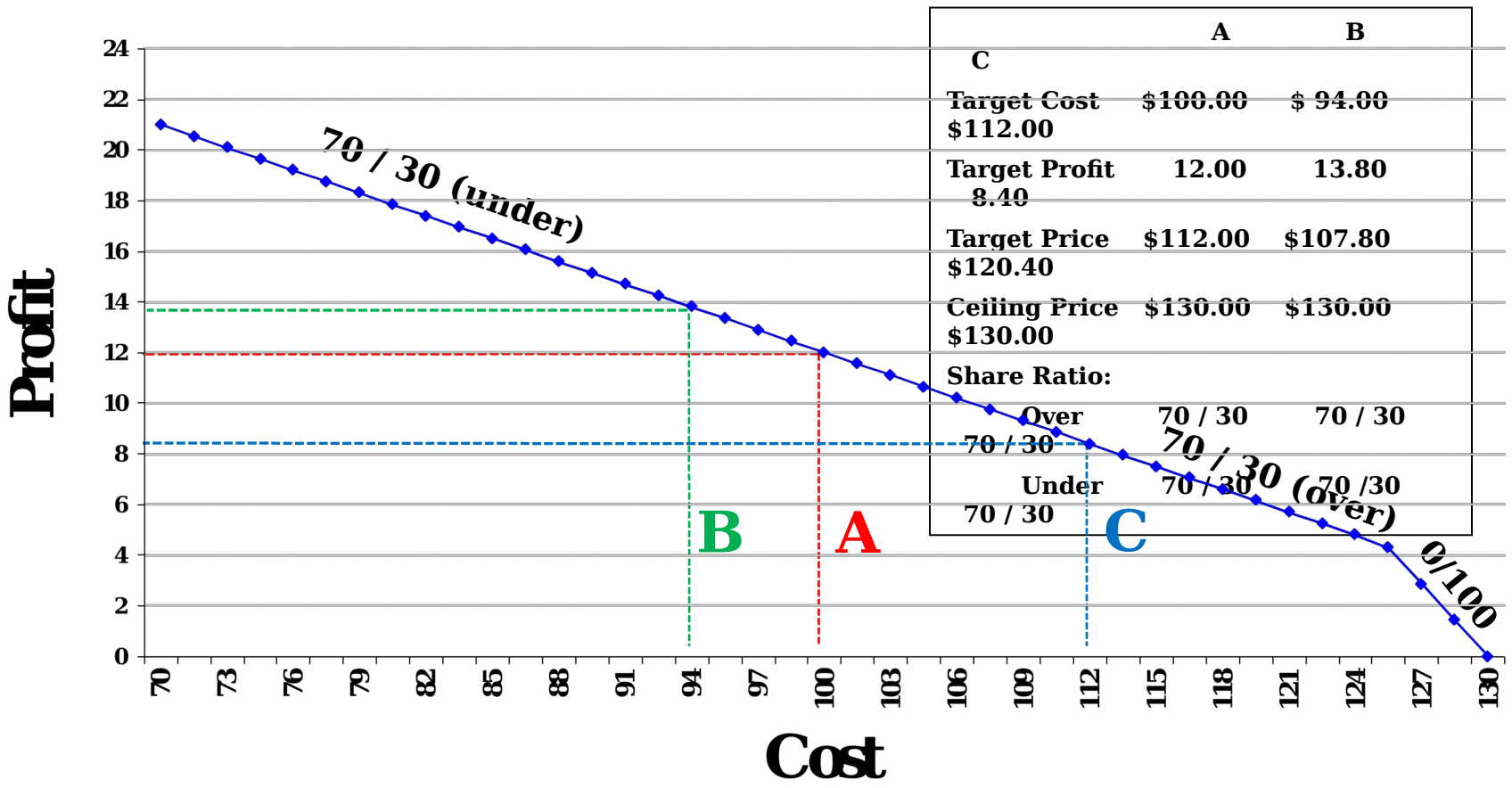
- **Cost Incentives are not one-size-fits-all**
  - **Each element of cost incentive structure is important**
  - **Don’t just focus on Target Cost & Target Fee / Profit**
- **The geometry (Share Lines, Min & Max Fees, Ceiling Price) is what creates the incentive**
- **The geometry can be a useful tool in the reaching settlement**

Incentive Geometry

Contractor offers you three settlement options. Which should you choose?

	A		B		C	
Target Cost	$100.0M		$94.0M		$112.0M	
Target Profit	12.0M	12.0%	13.8M	16.7%	8.4M	7.5%
Target Price	$112.0M		$107.8M		$120.4M	
Ceiling Price	$130.0M	130%	$130.0M	138%	$130.0M	116%
Share Ratio						
Over	70 / 30		70 / 30		70 / 30	
Under	70 / 30		70 / 30		70 / 30	

Incentive Geometry



	A	B	C
Target Cost	$100.00	$ 94.00	$112.00
Target Profit	12.00	13.80	8.40
Target Price	$112.00	$107.80	$120.40
Ceiling Price	$130.00	$130.00	$130.00
Share Ratio:			
Over	70 / 30	70 / 30	70 / 30
Under	70 / 30	70 /30	70 / 30

All three offers are financially identical. It's the same offer.

The final price to the Government under all three scenarios will be the same at every possible cost outcome.

Incentive Geometry
Understanding Share Lines

- **Any point along a constant share line (same share over and under) is financially equal as long as:**
  - **CPIF: Min & Max Fee dollars are held constant**
  - **FPIF: Ceiling Price dollars are held constant**

Ceiling Price & Risk

- **Ceiling Price should be a function of risk to the prime contractor.**
- **Examine cost elements**
- **Most cost elements present risks *and* opportunities for the contractor**
- **All elements of cost do not present equal risks or opportunities.**

Ceiling Price
Cost Element Risk

- **Material / Subcontracts**
  - **Negotiated FFP vendors generally pose little risk to the prime.**
  - **Risk Issues:**
    - **Late Delivery - what does history show?**
    - **Quality Issues - what does history show, hold vendor responsible**
    - **Vendor Default - Highly unlikely**
- **Indirect Rates**
  - **Risk Issue: will actual rates exceed negotiated rates**
  - **What does history show?**
    - **Look at history of forecasted rates 2 to 3 years out**

e.g. MFG O/H	2011	2012	2013
2010 FPRA	175.4%	174.6%	173.0%
Actual Rate	173.5%	169.0%	166.2%

Ceiling Price
Cost Element Risk (continued)

- **Labor Hours**
  - **Risk Issue: tasks will take more hours than negotiated**
    - **What does history show – how aggressive is target cost?**
- **Labor Rates:**
  - **Risk Issue: actual rates paid to employees will exceed negotiated rates – generally low risk**
- **Schedule Risk:**
  - **Schedule slip can only affect prime contractor's internal cost**
  - **Impact of a schedule slip will not be prime headcount (standing army) x months slip**
    - **Contractor will not have people "sitting around"**

Ceiling Price Analysis

- **Example :**
  - **Subcontract (FFP) $ 60 (negotiated by prime)**
  - **Prime Cost $ 40**
  - **Target Cost $100**

  - **Ceiling Price = $120 (120% ceiling of prime contract)**
  - **Ceiling Price – Target Cost = $20 of ceiling protection**

- **FFP Sub must perform contract for $60**
  - **Therefore all $20 of ceiling protection is applicable to prime cost**
  - **$20 ÷ $40 Prime Cost = 50% ceiling protection on prime cost**

Incentive Negotiation Strategy

A New Approach – FPIF Example

Rewarding Efficient Cost

- **The goal should be to determine what a "reasonably challenging, but achievable" Target Cost is and reward contractor accordingly.**
  - **"challenging but achievable" pertains to contractor's ability to perform the contract at that cost.**

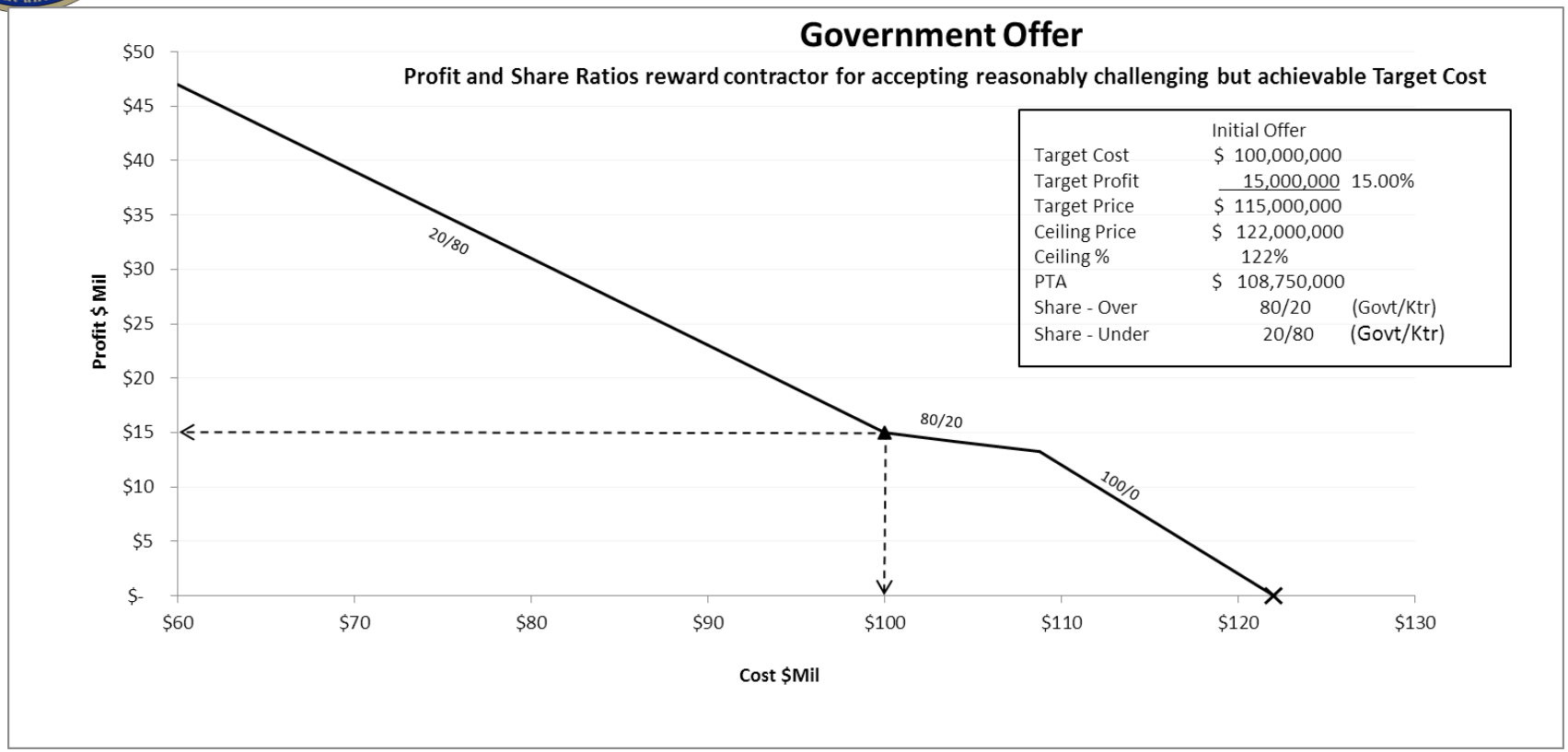
- **Reward contractor with a reasonably high Target Profit and favorable share ratios at that Target Cost.**
  - **This should be the most favorable profitability offer from the Government made in negotiations.**

The Negotiation Process

- **What is considered to be a "reasonably challenging, but achievable", cost position can change during negotiations based on new facts or data provided.**
  - **Contractor's refusal to move during negotiations is not "new facts or data"**

- **If Government offers at target cost go above this value, profit and share ratios should become less favorable for the contractor.**

FPIF Negotiation Strategy

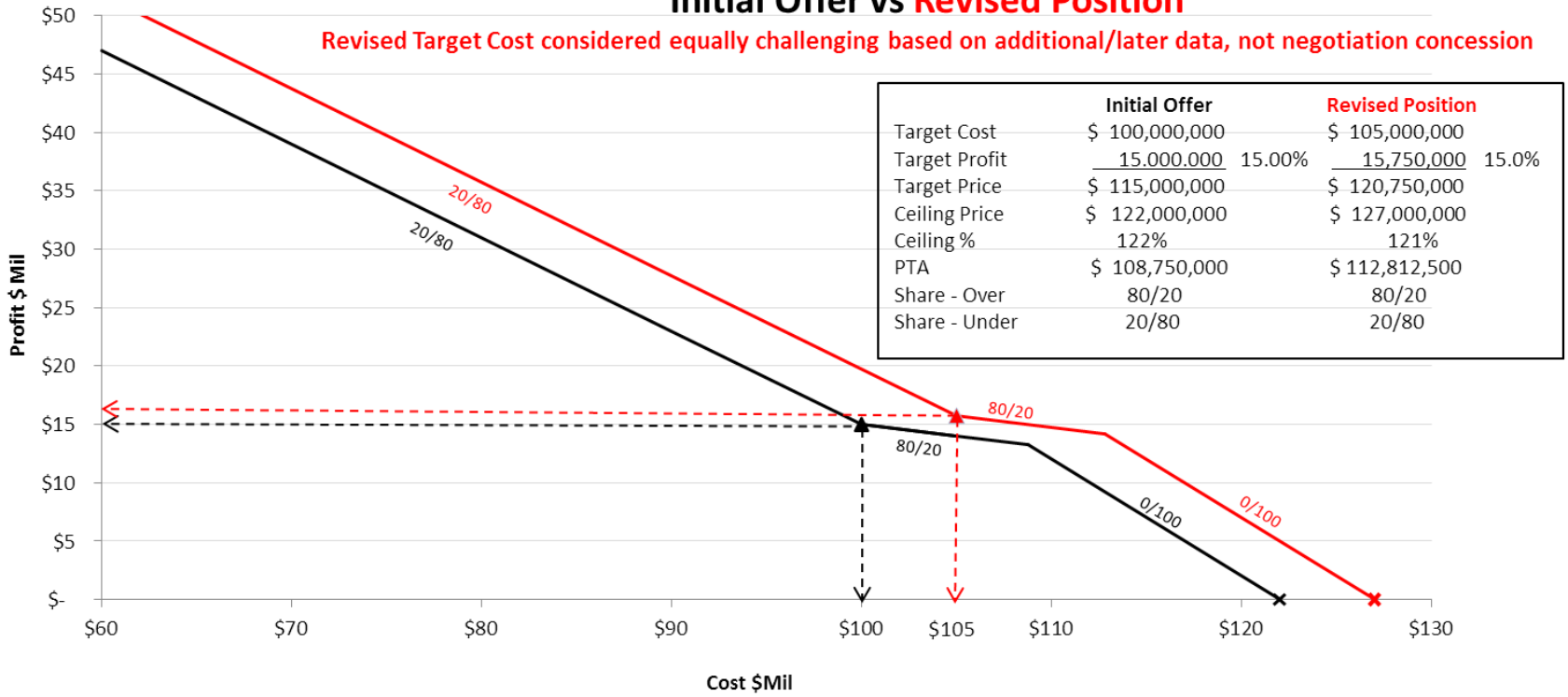


The Government strategy is to reward the contractor for accepting a reasonably challenging but achievable Target Cost. Achievable means achievable by the contractor in performance of the contract.

This offer should provide the contractor with the most favorable profit opportunity.

If the Government moves beyond this cost to reach settlement, contractor

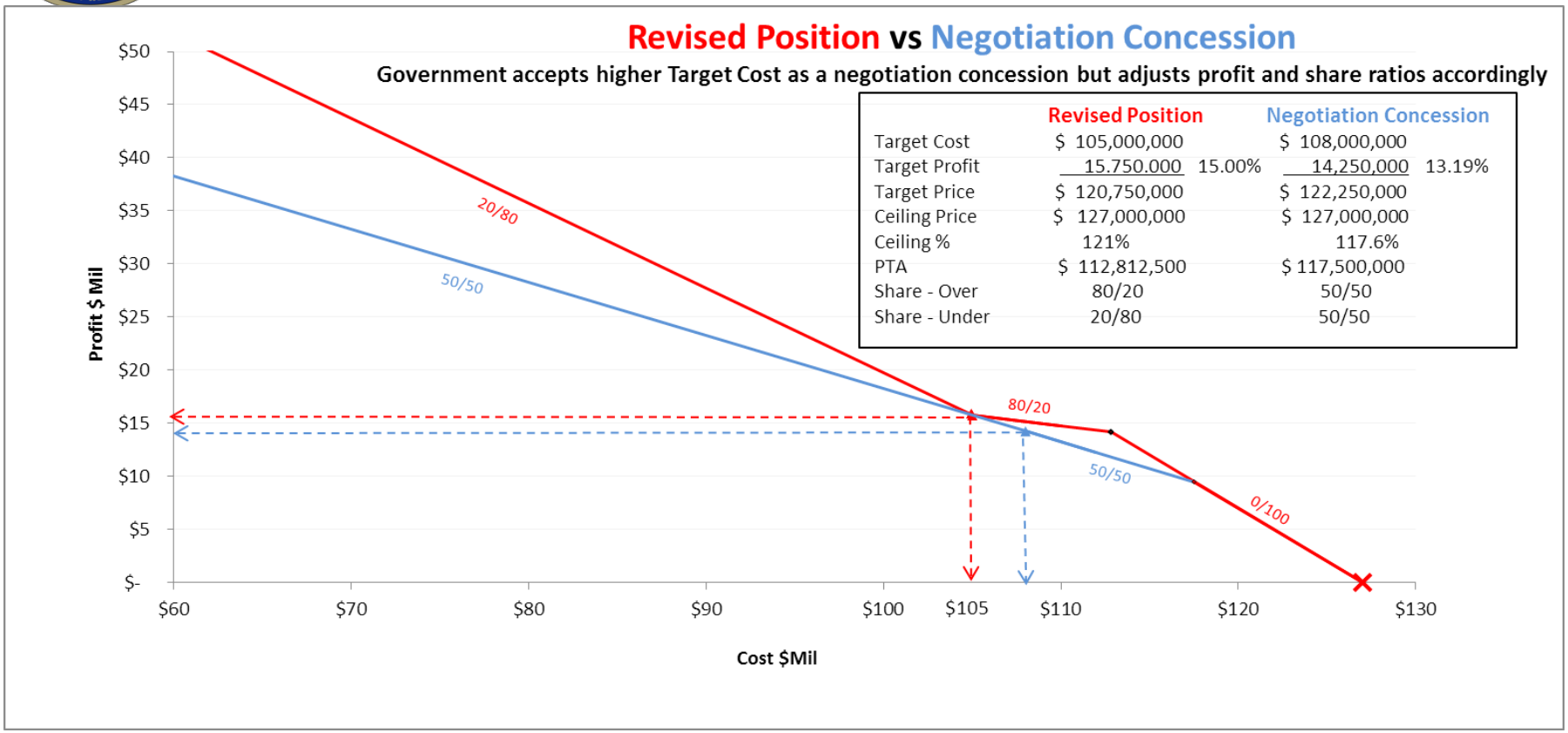
Adjusting for Later Data



The Government strategy is still the same. However, additional/later data reveals that a higher cost more accurately reflects a "reasonably challenging but achievable" Target Cost. Therefore, the contractor should be rewarded with the same profit rate and share ratios.

Contractor's refusal to move during negotiations is not "additional /later data".

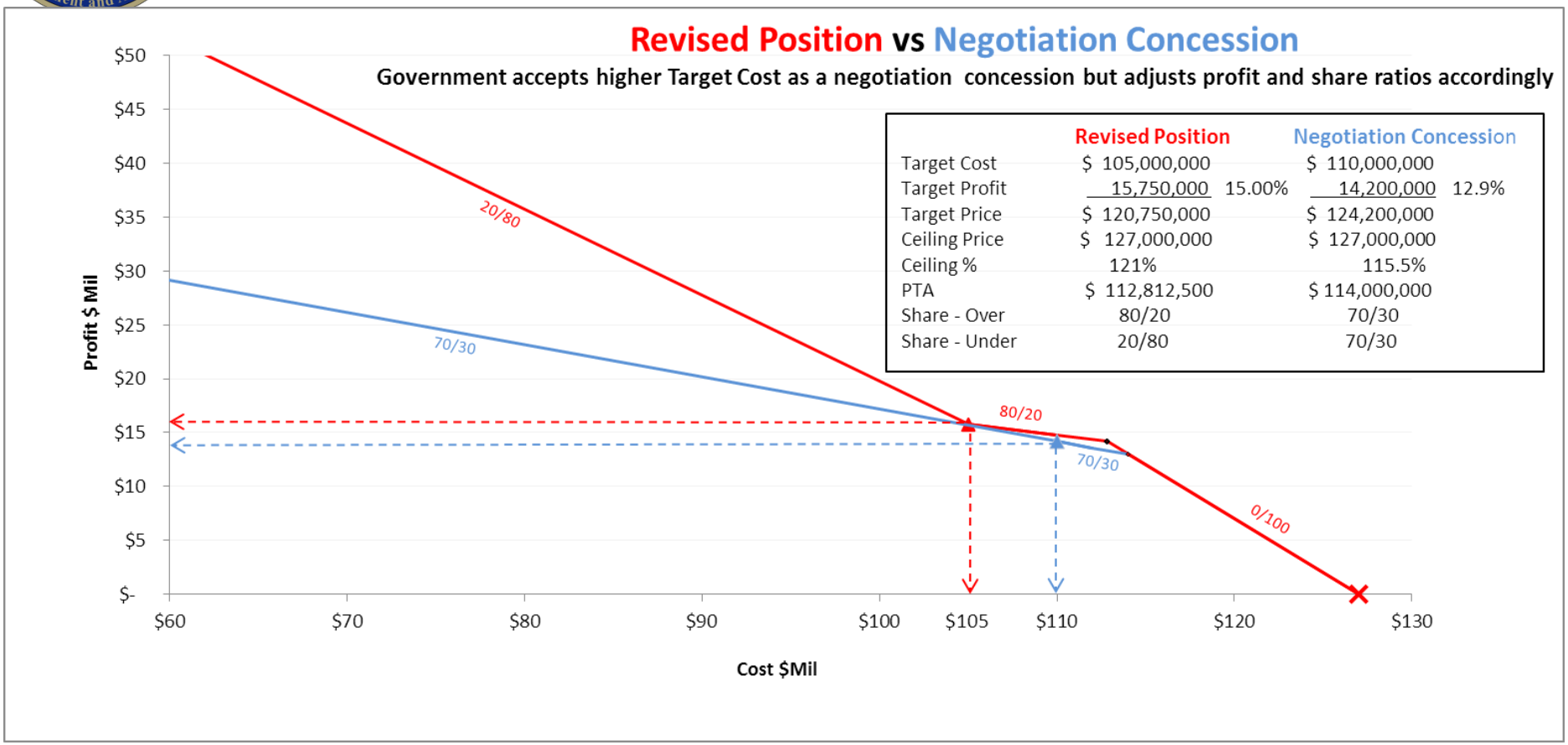
Negotiation Concession
Scenario 1 – Target Cost $108M



Government moves beyond what it considers to be the "reasonably challenging, but achievable" Target Cost .

Note that the profit the contractor would earn at the "Revised Position" cost outcome of $105M, is the same under either scenario (red and blue lines intersect), but what changes is the profit earned on either side of that cost outcome.

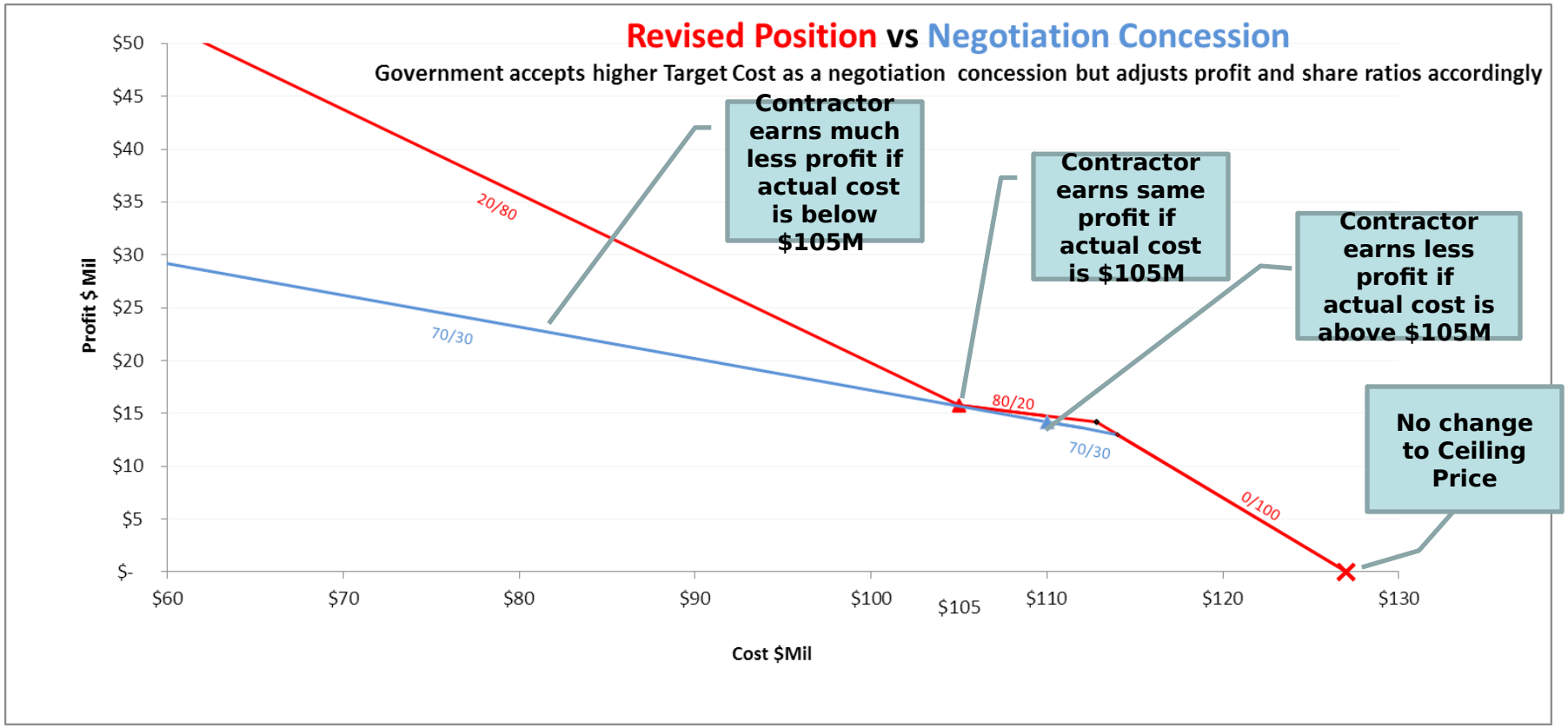
Negotiation Concession
Scenario 2 – Target Cost $110M



	Revised Position		Negotiation Concession	
Target Cost	$ 105,000,000		$ 110,000,000	
Target Profit	15,750,000	15.00%	14,200,000	12.9%
Target Price	$ 120,750,000		$ 124,200,000	
Ceiling Price	$ 127,000,000		$ 127,000,000	
Ceiling %	121%		115.5%	
PTA	$ 112,812,500		$ 114,000,000	
Share - Over	80/20		70/30	
Share - Under	20/80		70/30	

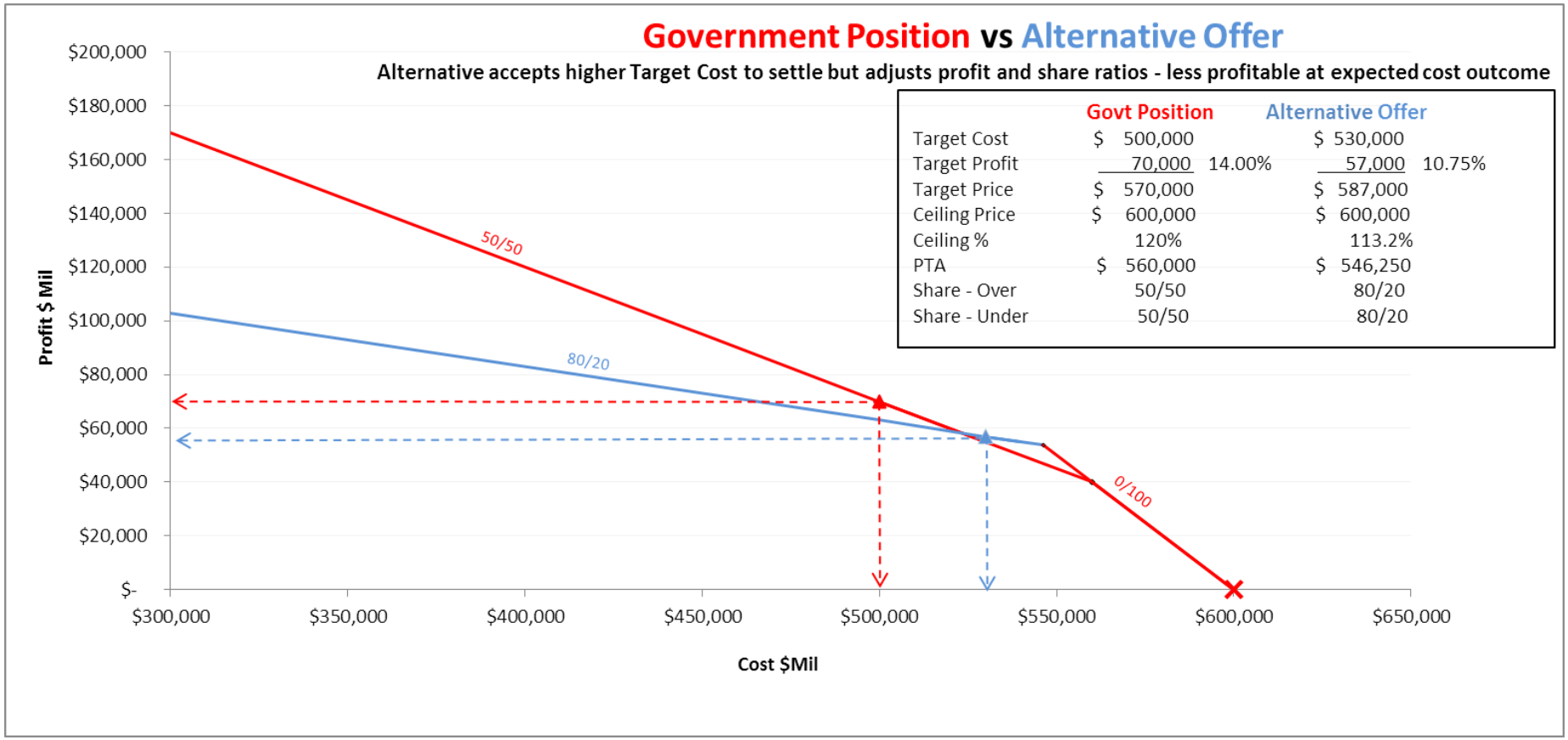
Government moves beyond what it considers to be the "reasonably challenging, but achievable" Target Cost .
Note that the profit the contractor would earn at the "Revised Position" cost outcome of $105M, is the same under either scenario (red and blue lines intersect) but what changes is the profit earned on either side of that cost outcome.

Understanding the Strategy

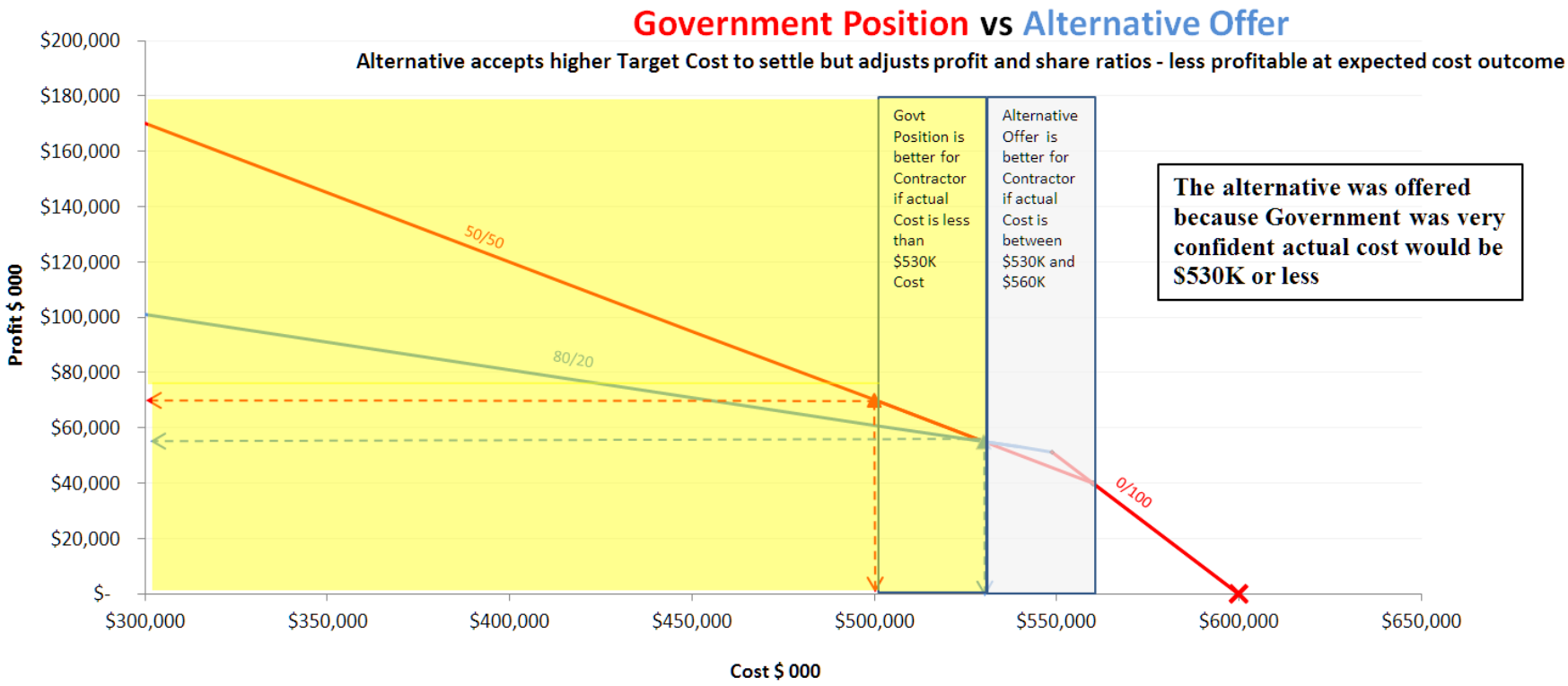


Although the ultimate price to the Government would be as low or lower at any cost outcome under the Negotiation Concession scenario, the Government is willing to reward the contractor with higher profits if he is willing to accept and manage to the "challenging but achievable" cost.

Applying the Strategy
Alternate Approach – actual example



Applying the Strategy
Alternate Approach - explained



Director
Defense Procurement and Acquisition Policy

Questions?

DEPARTMENT OF DEFENSE
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